WHAT IS CLAIMED IS:

1. An optical metrology system for scanning an object having a shiny surface, comprising:

at least one light source configured and adapted to emit a structured light pattern against the surface of the object;

at least one first polarizer disposed between the light source and the object such that the light pattern passes therethrough, the first polarizer being configured and adapted to vary at least one of the plane of polarization and the polarization angle of the light pattern;

at least one camera configured and adapted to take images of the object; and

at least one second polarizer disposed between the camera and the object, the second polarizer having a fixed orientation.

2. The optical metrology system of claim 1, wherein the light source is a laser source.

3. The optical metrology system of claim 1, wherein the first polarizer is rotatable about an axis defined by the light pattern.

4. The optical metrology system of claim 1, wherein each light source is configured and adapted to emit at least one laser beam against the object.

5. The optical metrology system of claim 1, further including a plurality of cameras configured and adapted to take images of the object.

6. The optical metrology system of claim 1, wherein each second polarizer is oriented at a different angular position relative to one another.

7. The optical metrology system of claim 1, wherein the first and second polarizer is at least one of a linear polarizer, a circular polarizer and an elliptical polarizer.

8. The optical metrology system of claim 1, wherein the images are combined to at least one of intensity profiles of the object, create phase information about the object and create a degree of polarization of the object.

9. An optical metrology system for scanning the surface of a shiny object, the optical metrology system comprising:

at least one light source configured and adapted to emit a structured light pattern against the surface of the object;

at least one first polarizing lens disposed between the light source and the object, the first polarizing lens being rotatable about an axis defined by the light beam;

at least one camera oriented to take images of the object; and

at least one second polarization lens disposed between each camera and the object, each second polarization lens having a fixed orientation relative to one another and having a different orientation relative to one another.

10. The optical metrology system of claim 9, wherein the light source is a laser source.

11. The optical metrology system of claim 9, wherein the first polarizer is rotatable about an axis defined by the light pattern.

12. The optical metrology system of claim 9, wherein each light source is configured and adapted to emit at least one laser beam against the object.

13. The optical metrology system of claim 9, further including a plurality of cameras configured and adapted to take images of the object.

14. The optical metrology system of claim9, wherein each second polarizer is oriented at a different angular position relative to one another.

15. The optical metrology system of claim 9, wherein the first and second polarizer is at least one of a linear polarizer, a circular polarizer and an elliptical polarizer.

16. The optical metrology system of claim 9, wherein the images are combined to at least one of intensity profiles of the object, create phase information about the object and create a degree of polarization of the object.

17. A method for performing an optical metrology on an object having a shiny surface, the method comprising the steps of:

providing an optical metrology system including:

at least one light source for emitting a light pattern against the object;

at least one first polarizer operatively disposed between the light source and the object, the first polarizers being capable of varying at least one of the plane of polarization and the polarization angle of the light pattern;

at least one camera for capturing images of the object; and

at least one second polarizer fixedly disposed between the camera and the object;

emitting a light pattern, through the first polarizer, against a surface of the object;

rotating the first polarizer; and

using the camera to capture at least one image of the object, wherein the image is captured through the second polarizer.

18. The method according to claim 17, wherein the system includes a plurality of cameras, and wherein the method includes the step of using each camera to capture multiple images of the object.

19. The method according to claim 17, further comprising the step of combining the images captured from the cameras to separate desired information regarding the object from noise produced by the surface of the object.

20. The method according to claim 17, further comprising the step of interpolating laser beams in the image space to arrive at phase information.

21. The method according to claim 17, wherein each of the first and second polarizers is a linear polarizer, a circular polarizer, and an elliptical polarizer.